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Proposed Amendments to the Drawings

Please see the attached proposed Replacement Sheet, which adds element 75 in Figure 4b. This element 75 existed in the originally-filed informal drawings of the parent patent application but was not transferred to the formal drawings when they were generated.

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REMARKS

Applicants have cancelled claims 53-58, 62-64 and 66, and amended claims 59-61, 65, 67, 68, 71, 72, 74, 78 and 90. Claims 59-61, 65 and 67-94 are presently pending in this application.

Regarding the objection to the drawings under 37 C.F.R. 1.83, Applicants submit that the present drawings including a new Figure 4b show every feature of the invention specified in the claims.

The Office Action stated that the "user control accepting a user input which specifies a cutting efficiency" from claim 59 must be shown or the feature(s) canceled from the claim(s). In response, Applicants submit herewith a replacement drawing page in which Figure 4b containing element 75 is added. This element 75 existed in the originally-filed informal drawings of the parent patent application but was not transferred to the formal drawings (when they were generated). Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that the "outputting [of] atomized fluid particles from a plurality of atomizers" from claims 69, 71, 72 and 80 must be shown or the feature(s) canceled from the claim(s). In response, Applicants direct the Examiner's attention to Figure 4a, which shows a plurality of atomizers for outputting atomized fluid particles. The paragraph bridging pages 12 and 13 of Applicants' specification states that "the electromagnetically induced mechanical cutter ... comprises a nozzle 71, which may be interchanged with other nozzles (not shown). A second nozzle 72, shown in phantom lines, may also be used." Clearly, the symmetrical and identically-appearing nozzles 71 and 72 would appear to one of ordinary skill in the art to not be mutually exclusive and to be capable of identical and simultaneous operation. According to Section 2125 of the Manual of Patent Examining Procedure (MPEP), which speaks on an analogous issue of

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the interpretation of prior-art drawings, "the drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art." The above language from Applicants' specification uses the phrase "may also be used" rather than "may alternatively be used" or "may be interchanged with nozzle 71" or "may be used instead of nozzle 71." Applicants thus submit that the queried language is shown in the drawings.

On the issue of dimensions of drawings, according to a case mentioned in Section 2125 of the MPEP, "it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue," [but] the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art." Applicants respectfully submit that in this and the other instances discussed herein the drawings are not relied upon to show fine and exacting to-scale details such as particular and precise sizes and exact dimensions. Moreover, as stated above, the standard for evaluating what the drawings disclose is what they reasonably disclose and suggest to one of ordinary skill in the art.

The Office Action stated that "an angle of incidence of atomized fluid particles from a first one of the plurality of atomizers" from claim 72 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand a fluid particle's angle of incidence to be measured with respect to a reference item of the structure, such as the fiber tip, so that the fluid particle would exit the atomizer with an angle of incidence relative to that reference structure. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that elements of the phrase "an angle of incidence of atomized fluid particles from a first one of the plurality of atomizers is different from an angle of incidence of atomized fluid particles from a second one of the plurality of

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atomizers" from claim 72 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand a fluid particle's angle of incidence to be measured with respect to an item of the structure other than the atomizer, such as the fiber tip, and would further understand that the angle of incidence of particles from nozzle 71 would be different than the angle of incidence of particles from nozzle 72. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that language to the effect that "the fiber guide tube is disposed between the first atomizer and the second atomizer" from claim 73 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand the fiber 23 to be disposed between the nozzle 71 and the nozzle 72. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "the output axes point[ing] from the respective atomizers to a general vicinity of the interaction zone" from claims 74 and 78 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand an atomizer's output axis to be oriented in a direction parallel with a direction at which the atomizer outputs particles and that, consequently, the output axes of the two nozzles 71 and 72 point to a general vicinity of the interaction zone 59. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "the output axes intersect[ing] a longitudinal axis of the fiber guide within the interaction zone" from claim 75 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand an atomizer's output axis to be oriented in a direction parallel with a direction at which the atomizer outputs particles and

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that, consequently, the output axes of the two nozzles 71 and 72 point to and thus intersect the longitudinal axis (see the dashed line) of the fiber guide 23 within the interaction zone 59. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that the feature of "atomized fluid particles from a first one of the plurality of atomizers combin[ing] with atomized fluid particles from a second one of the plurality of atomizers" from claims 71 and 76 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand the atomizers to output particles in directions at which the atomizers are pointed, so that, based upon what is shown in the figure, at least some of the particles output from nozzles 71 and 72 would be combined. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that the structure of "an output axis of a first one of the plurality of atomizers [being] not parallel to an output axis of a second one of the plurality of atomizers" from claim 77 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand an atomizer's output axis to be oriented in a direction parallel with a direction at which the atomizer outputs particles, such that the output axes of nozzles 71 and 72 are not parallel. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that the structure of "atomized fluid particles [being] simultaneously output from the plurality of atomizers into the interaction zone" from claim 89 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer again to the paragraph bridging pages 12 and 13 of Applicants' specification which states that a "second nozzle 72, shown in phantom lines, may also be used." A person of ordinary skill in the art would understand the nozzles 71 and 72 to be capable of having identical structures since they are depicted with essentially identical images and to be

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capable of identical and simultaneous operation since they are symmetrically positioned on the laser housing and are symmetrically oriented. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "a dial for controlling a repetition rate of the electromagnetic energy" from claim 90 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4b and language from the full paragraph on page 18 of Applicants' Specification which states that "[t]he user input device for controlling cutting efficiency may comprise a simple pressure and flow rate gauge 75 (FIG. 5) or may comprise a control panel as shown in FIG. 6, for example." Moreover, the second full paragraph on page 15 of Applicants' Specification states that the "control panel 77 ... may comprise ... a repetition rate 82" which is depicted, as would be understood by one of ordinary skill in the art, as a dial. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "a dial for controlling an average power of the electromagnetic energy" from claim 91 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4b and language from the full paragraph on page 18 of Applicants' Specification which states that "[t]he user input device for controlling cutting efficiency may comprise a simple pressure and flow rate gauge 75 (FIG. 5) or may comprise a control panel as shown in FIG. 6, for example." Moreover, the second full paragraph on page 15 of Applicants' Specification states that the "control panel 77 ... may comprise ... an average power control 81" which is depicted, as would be understood by one of ordinary skill in the art, as a dial. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that structure corresponding to the language "wherein the plurality of atomizers is two atomizers" from claim 92 must be shown or the feature(s) canceled from the claim(s). In response, Applicants direct the Examiner's attention to

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Figure 4a, which shows a plurality of atomizers for outputting atomized fluid particles. As discussed above, the paragraph bridging pages 12 and 13 of Applicants' specification states that "the electromagnetically induced mechanical cutter ... comprises a nozzle 71" and that a "second nozzle 72, shown in phantom lines, may also be used." The nozzles 71 and 72 would appear to one of ordinary skill in the art to not be mutually exclusive. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "the output axes intersect[ing] a longitudinal axis of the fiber guide near or in the interaction zone" from claim 93 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand an atomizer's output axis to be oriented in a direction parallel with a direction at which the atomizer outputs particles and that, consequently, the output axes of the two nozzles 71 and 72 point to and thus intersect the longitudinal axis (see the dashed line) of the fiber guide 23 within the interaction zone 59. Applicants thus submit that the queried language is shown in the drawings.

The Office Action stated that "the output axes intersect[ing] in a general vicinity of the [laser] path near or in the interaction zone" from claim 94 must be shown or the feature(s) canceled from the claim(s). In response, Applicants refer to Figure 4a and submit that a person of ordinary skill in the art would understand an atomizer's output axis to be oriented in a direction parallel with a direction at which the atomizer outputs particles and that, consequently, the output axes of the two nozzles 71 and 72 point to and thus intersect the longitudinal axis or laser path (see the dashed line) of the fiber guide 23 within the interaction zone 59. Applicants thus submit that the queried language is shown in the drawings.

Regarding the Office Action's objection to the Amendment filed February 7, 2005 as introducing new matter into the disclosure under 35 U.S.C. 132(a), Applicants submit

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that the Amendment did not introduce new matter for reasons including those set forth above.

Regarding the rejection of claims 68-94 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, Applicants respectfully traverse this rejection as for reasons including those set forth above. Applicants respectfully request that this rejection under 35 U.S.C. 112, first paragraph, be reconsidered and withdrawn.

Regarding the rejection of claims 17 and 30 under 35 U.S.C. 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, Applicants respectfully traverse this rejection and submit that these claims have been cancelled. Therefore, the rejection would appear to be moot. It is respectfully requested that this rejection under 35 U.S.C. 112, second paragraph, be reconsidered and withdrawn.

Regarding the rejections of claims 53-58 and 60-68 in various combinations under 35 U.S.C. 102(a) and 102(b) as being clearly anticipated by various references, Applicants respectfully traverse these rejections. In an effort to expedite the prosecution of the present application, however, Applicants have either amended the claims to depend from claims other than those rejected under 102 or cancelled the claims without prejudice to rights of Applicants to pursue the inventions defined therein in continuation applications. Accordingly, since claims 54-58 and 60-68 have been amended to depend from non-102 rejected claims or cancelled, the rejections under 35 U.S.C. 102(a) and 102(b) would appear to be moot. Applicants thus request that the rejections under 35 U.S.C. 102 be reconsidered and withdrawn.

Regarding the rejections of claims 53-94 in various combinations under 35 U.S.C. 103(a) as being unpatentable in view of various references, Applicants respectfully

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traverse these rejections. Each of the rejections (with the exception of those on the bottom of page 8 and top of page 9 of the Office Action, which are unintelligible and thus ignored) would appear to rely upon U.S. Patent No. 6,544,256 to Rizoiu et al. (the '256 patent) for a teaching of multiple atomizers having non-parallel orientations relative to the laser axis with axes that converge near or at the interaction zone. It would appear, however, that the '256 patent is not prior art, since its priority date is April 24, 1998 and the priority date of the subject patent application is August 31, 2005. Accordingly, since none of the remaining prior art references of record appears to provide the teaching of the '256 patent, namely, of multiple atomizers having non-parallel orientations relative to the laser axis with axes that converge near or at the interaction zone, Applicants respectfully request that the rejections under 35 U.S.C. 103(a) be reconsidered and withdrawn.

The Office Action rejected claims 53-94 in various combinations under the judicially created doctrine of obviousness-type double patenting as being unpatentable over various set of claims of 11 different patents. In response, Applicants have submitted herewith 11 Terminal Disclaimers and thus request that the Examiner reconsider and withdraw the obviousness-type double patenting rejections.

Applicants respectfully submit that the application is now in condition for allowance, and an early indication of the same is requested. The Examiner is invited to contact the undersigned with any questions.

Respectfully submitted,



Kenton R. Mullins
Attorney for Applicants
Registration No. 36,331

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STOUT, UXA, BUYAN & MULLINS, LLP
4 Venture, Suite 300
Irvine, CA 92618
Tel: 949-450-1750
Fax: 949-450-1764